

**Notice of Allowability**

Application No.

10/736,679

Examiner

Marie R. Yamnitzky

Applicant(s)

INOUE ET AL.

Art Unit

1794

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to Amendment and IDS filed October 22, 2007, IDS filed December 20, 2007.
2. ☒ The allowed claim(s) is/are 1,2,11,12,14-18,20-42 and 46-56.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☒ All    b) ☐ Some\*    c) ☐ None    of the:
  1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
  5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
    - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
      - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
    - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO/SB/08),  
Paper No./Mail Date Oct. 22, 2007, Dec. 20, 2007
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☒ Interview Summary (PTO-413),  
Paper No./Mail Date 12172007
7. ☒ Examiner's Amendment/Comment
8. ☐ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_

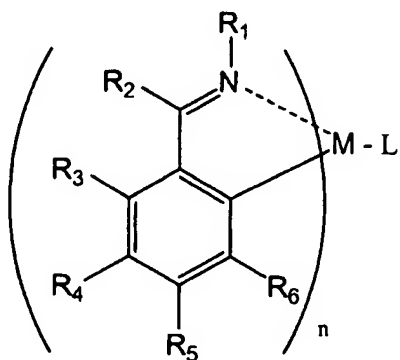
Art Unit: 1794

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Jeffrey Costellia on December 17, 2007.

Claims 1, 11 and 17 have been amended, and claims 3, 13 and 19 have been cancelled as shown below. (The text of claims 2, 12, 14-16, 18, 20-42 and 46-56 remains as set forth in the amendment filed October 22, 2007.)

1. (Currently Amended) An organometallic complex represented by the following general formula 2,



(Formula 2)

wherein R<sub>1</sub> is an alkyl group, an aryl group, a substituted aryl group, a heterocyclic group or a substituted heterocyclic group,

Art Unit: 1794

wherein  $R_2$  is an alkyl group, an aryl group, a substituted aryl group, a heterocyclic group, or a substituted heterocyclic group,

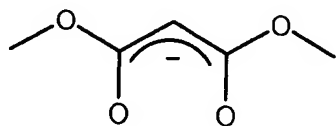
wherein each of  $R_3$ ,  $R_4$ ,  $R_5$ , and  $R_6$  is identical with each other or different from each other and is hydrogen, halogen, an alkyl group, an alkoxyl group, an aryl group, a substituted aryl group, a heterocyclic group, or a substituted heterocyclic group,

wherein M is an element of Group 9 or an element of Group 10,

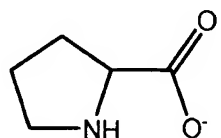
wherein n is 2 when the M is the element of Group 9 or n is 1 when the M is the element of Group 10, and

~~wherein L is a monoanionic ligand having a  $\beta$ -diketone structure, a monoanionic bidentate ligand having a carboxyl group, or a monoanionic bidentate ligand having a phenolic hydroxyl group,~~

wherein ~~the~~ L is any of monoanionic ligands shown by the following structure formulas 4 and or 6:



(Formula 4)



(Formula 6).

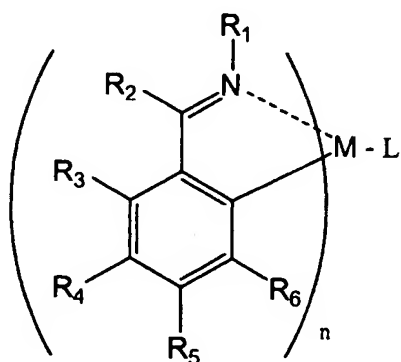
3. (Cancelled)

Art Unit: 1794

11. (Currently Amended) A light emitting device comprising:

a first electrode over a substrate;

a light emitting layer comprising an organometallic complex represented by the following general formula 2, over the first electrode;



(Formula 2)

a second electrode over the light emitting layer,

wherein  $R_1$  is an alkyl group, an aryl group, a substituted aryl group, a heterocyclic group or a substituted heterocyclic group,

wherein  $R_2$  is an alkyl group, an aryl group, a substituted aryl group, a heterocyclic group, or a substituted heterocyclic group,

wherein each of  $R_3$ ,  $R_4$ ,  $R_5$ , and  $R_6$  is identical with each other or different from each other and is hydrogen, halogen, an alkyl group, an alkoxy group, an aryl group, a substituted aryl group, a heterocyclic group, or a substituted heterocyclic group,

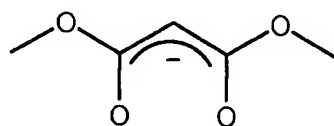
wherein M is an element of Group 9 or an element of Group 10,

wherein n is 2 when the M is the element of Group 9 or n is 1 when the M is the element of Group 10, and

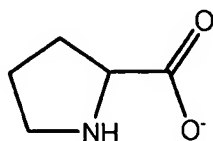
Art Unit: 1794

~~wherein L is a monoanionic ligand having a  $\beta$ -diketone structure, a monoanionic bidentate ligand having a carboxyl group, or a monoanionic bidentate ligand having a phenolic hydroxyl group;~~

wherein the L is any of monoanionic ligands shown by the following structure formulas 4 and or 6:



(Formula 4)



(Formula 6).

13. (Cancelled)

17. (Currently Amended) A light emitting device comprising:

a thin film transistor over a substrate;

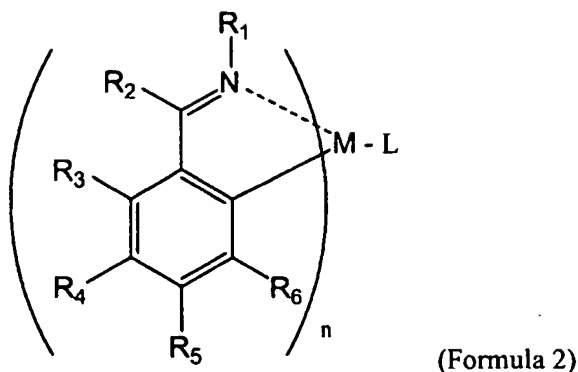
an interlayer insulating film over the thin film transistor;

a first electrode electrically connected to the thin film transistor, over the interlayer

insulating film;

a light emitting layer comprising an organometallic complex represented by the following general formula 2, over the first electrode;

Art Unit: 1794



a second electrode over the light emitting layer,

wherein  $R_1$  is an alkyl group, an aryl group, a substituted aryl group, a heterocyclic group or a substituted heterocyclic group,

wherein  $R_2$  is an alkyl group, an aryl group, a substituted aryl group, a heterocyclic group, or a substituted heterocyclic group,

wherein each of  $R_3$ ,  $R_4$ ,  $R_5$ , and  $R_6$  is identical with each other or different from each other and is hydrogen, halogen, an alkyl group, an alkoxyl group, an aryl group, a substituted aryl group, a heterocyclic group, or a substituted heterocyclic group,

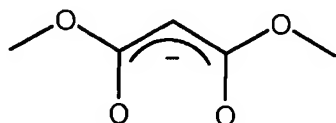
wherein M is an element of Group 9 or an element of Group 10,

wherein n is 2 when the M is the element of Group 9 or n is 1 when the M is the element of Group 10, and

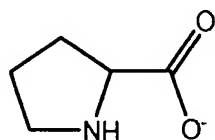
~~wherein L is a monoanionic ligand having a  $\beta$ -diketone structure, a monoanionic bidentate ligand having a carboxyl group, or a monoanionic bidentate ligand having a phenolic hydroxyl group,~~

Art Unit: 1794

wherein ~~the~~ L is any of monoanionic ligands shown by the following structure formulas 4 and or 6:



(Formula 4)



(Formula 6).

19. (Cancelled)

---

Claims 1, 11 and 17 are amended to delete the broad definition of L in view of the narrow definition of L which was incorporated into claims 1, 11 and 17 by applicant's amendment filed October 22, 2007. Claims 1, 11 and 17 now correspond in scope to prior claims 43-45, respectively.

Claims 3, 13 and 19 are cancelled in view of the narrow definition of L in claims 1, 11 and 17.

Art Unit: 1794

Claims 1, 2, 11, 12, 14-18, 20-42 and 46-56 are allowed. Allowed claims 1, 2, 11, 12, 14-18, 20-33, 38, 34, 39, 35, 40, 36, 41, 37, 42 and 46-56 are renumbered as 1-43, respectively. (The sequence of some of the dependent claims was altered so that a claim which depends from a dependent claim is not separated by any claim which does not also depend from said dependent claim. See MPEP § 608.01(n).)

Any inquiry concerning this communication should be directed to Marie R. Yamnitzky at telephone number (571) 272-1531. The examiner works a flexible schedule but can generally be reached at this number from 7:00 a.m. to 3:30 p.m. Monday-Friday.

The current fax number for all official faxes is (571) 273-8300. (Unofficial faxes to be sent directly to examiner Yamnitzky can be sent to (571) 273-1531.)

MRY  
December 17, 2007



MARIE YAMNITZKY  
PRIMARY EXAMINER

1794